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The Battle Over Verification

The struggle over ratification of the strategic arms limitation treaty (SALT II) with the Soviet Union turns in part on how well Soviet compliance can be verified. Paul R. Bennett, who thinks it can, is an arms control specialist with the Union of Concerned Scientists. Charles M. Kupperman, who does not, is a defense analyst with the Committee on the Present Danger.

By Paul R. Bennett

IT WOULD be utterly foolish and tremendously dangerous to rely on "the honor system" for enforcement of SALT II. Fortunately, we don't have to trust the Russians, because today's sophisticated military satellites, radars, signal reception gear and computers can probe deep into the interior of the Soviet Union and detect any significant violation.

Take SALT's overall ceilings, for example. Since our huge satellite cameras can capture details as small as a golf ball, the Soviets have virtually no chance of building illegal missile silos, submarines or bombers without detection. Nor could they slip extra Backfires or forbidden silo reload equipment past our view. Certainly the Soviet Union stretches across vast territory, but American satellites pass over every inch of it every day.

Camouflage won't help either. Special multi-color image techniques and computerized picture enhancement would reveal any hidden facilities. Efforts to conceal would themselves constitute violations of the treaty.

In fact, launcher verification by satellite is so good that SALT critics generally skip over the subject entirely and go directly to other concerns: Can we determine the number of missiles equipped with multiple warheads ("MIRVs" in SALT jargon)? Can we count the MIRVs atop a particular missile?

Yes we can, during the two dozen test flights every Soviet missile goes through to attain combat reliability. Anything shot up in these tests falls to earth within easy range of what is probably the world's most sophisticated radar, at Shemya Air Force Base in the Aleutian Islands. A Soviet basketball couldn't get past this device, which is supplemented by planes and ships in the vicinity.

Under SALT rules, "blank shots" (Like those included in several Soviet SS-18 missile tests) count as the real thing. Aiming and shooting maneuvers of a warhead carrier, tracked by our powerful radar in Turkey and signaled by intercepted telemetry, count even if no warhead is actually released.

Assume a test missile carried MIRVs. Prior to liftoff, American satellite cameras photographed its launcher (silo or submarine tube). All other launchers of the same design count as MIRV launchers. Non-MIRV look-alikes of these launchers are banned. These rules leave the Soviets no way to secretly add illegal MIRVed missiles.

All this should give some perspective on the loss of our Iran monitoring stations. Radar and listening equipment there followed Soviet missile tests at low altitudes, providing important tip-offs to new missile developments restricted by SALT. Similar facilities in Turkey fail to pick up certain valuable data, because they are older and farther away.

Where does that leave us? Satellite photographs still reveal the dimensions of test missiles. Our Aleutian radar tracks descending warheads, allowing us to calculate missile throw-weight. The bases in Turkey, radars elsewhere and heat-sensing satellites watch the ascent of test flights. But the certainty of several measurements is less without Iran.

We can quickly compensate for the loss by improving our facilities in Turkey, by sending in specially equipped U-2 planes to follow missile tests, and/or by launching sounding rockets to shadow those tests. Ultimately, we can orbit enough electronic intelligence satellites to eliminate dependance on ground stations for launch monitoring. These steps will maintain the total monitoring capability necessary to SALT verification.

That brings us to the cruise missile, the favorite straw man of SALT verification critics. Sure, the small size of these precision-guided drones makes them difficult to verify. But the Soviets lag so far behind in cruise missile development that they couldn't reach illegal levels before the treaty expires anyway. The United States accepted cruise missile limits because *in return* the Soviets agreed to a ceiling on MIRVed land-based missiles (their most threatening weapons) and to a freeze on warheads per missile (the payload of their most threatening weapons). These crucial restrictions can be confidently verified, as described above.

So why does everyone think the United States cannot monitor SALT? I suggest that SALT opponents have successfully exploited this technical issue by scaring the public with sensational charges. Somewhat excessive secrecy restrictions have prevented a credible Administration response. It's a clever tactic for defeating the treaty, but not one that serves the security interests of America in the nuclear age.

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PRESIDENT Carter has stated repeatedly that the SALT II treaty "will be verifiable" because "we have very sophisticated proven means—including our satellites—to determine for ourselves whether the Soviet Union is meeting its treaty obligations." Such words fail to place the issue of verification in the proper perspective: That SALT II, far from being verifiable, is a bad agreement on both strategic and political grounds, and a bad agreement does not cease to be a bad agreement by being wholly verifiable.

By Charles M. Kupperman

Not only does SALT II limit the wrong things, the United States has little capability to verify Soviet compliance with the critical terms of SALT II limits. Soviet violations of both the letter and the spirit of SALT I and our reluctance to confront the Soviets quickly and resolutely on such matters have set a bad political and strategic precedent for Soviet compliance with SALT II.

Another major source of difficulty is the treaty's language. Definitions of key terms, such as "missile launcher" and "heavy bomber," are extremely weak. In addition, loopholes in the treaty will compound the problem of verification. The limit of one "new type" of ICBM with no limits on new types of submarine-launched ballistic missiles is one glaring loophole. The failure to close such loopholes permits the Soviet Union to further expoit its "breakout potential" for quickly adding to its strategic capability. Components of the fifth generation of Soviet missiles could be easily retrofitted to Soviet ICBMs currently deployed. Placing the propulsion system of the SS-17 or an improved version in an SS-19 type missile would give the Soviets an ICBM nearly as capable as the heavy SS-18 missile.

While the administration appears to be satisfied with its assertion that "we do not rely on trust or Soviet good faith," provisions covering Soviet cruise missile capabilities and deployments, Soviet encryption of telemetry in missile tests, and the flimsy assurances relating to the Backfire bomber, for example, are based on trusting the Soviets.

Even assuming that the Soviets will neither deliberately conceal activities nor attempt to deceive U.S. intelligence (an analytical leap of faith by the administration of the first order), recent intelligence coups by the Soviet Union—acquisition of the technical manual for the KH-11 satellite (reportedly our most advanced photo reconnaissance satellite) and vital information on other U.S. satellite systems—have severely compromised U.S. verification resources and capabilities. As a consequence, the Soviet Union now knows what U.S. intelligence satellites can see on each pass over the Soviet Union.

Despite the administration's fixation with compromised verification technology, the fact that the number of Soviet missiles and warheads produced and stockpiled is not limited by SALT should not be forgotten nor that overhead photo reconnaissance cannot peer inside a building, shed, or under canvas, and that it is limited by adverse meteorological conditions.

Regardless of how precise satellite photo reconnaissance becomes, it cannot reveal the range of Soviet cruise missiles or the type of warheads they carry. Verification of Soviet cruise missile deployment *inside* Backfire bombers will be virtually impossible to detect. Other potential Soviet developments that would be militarily significant and unverifiable include the clandestine deployment of MIRVed or un-MIRVed missiles or deployment of a longer range sea-launched cruise missile on their already large number of cruise missile submarines.

The loss of U.S. intelligence facilities in Iran has virtually eliminated our ability to verify critical qualitative aspects of Soviet missile performance, including the power of Soviet missile boosters, the specific impulse of the propulsion system, and the throwweight of the missile. The proposed stopgap measures simply cannot replace these sites, and when Turkey, a NATO ally, requires Soviet permission to allow American U-2 aircraft the use of Turkish airspace, this indicates how far the strategic balance has shifted against the West.

Finally, verification of the terms of SALT II ultimately rests upon the nature and accuracy of intelligence estimates. The SALT record indicates a rather substantial American error rate in the intelligence estimates of Soviet quantity, quality, and the rate of Soviet strategic improvements. As Walter Lippmann said,

"I do not find much ground for reasonable confidence in a policy which can be successful only if the most optimistic prediction should prove to be true. Surely a sound policy must be addressed to the worst and hardest that may be judged to be probable, and not to the best and easiest that may be possible."

After nearly ten years of SALT, such skepticism is long overdue.